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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/584,746

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Ursula Ziegler

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EXAMINER

CHEN, VIVIAN

ART UNIT

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1794

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/584,746	<b>Applicant(s)</b> ZIEGLER ET AL.	
	<b>Examiner</b> Vivian Chen	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14-19 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

1. Claim 13 has been cancelled by Applicant.

### *Claim Objections*

1. Claim 19 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

### *Double Patenting*

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-12, 14-19 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over:

(a) claim s 22-41 of copending Application No. 11/576,309 (US 2007/0264514); or

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(b) claims 1-17 of copending Application No. 11/846,964 (US 2008/0029934);  
in view of ZIEGLER ET AL (US 6,296,797),  
and in view of MASUBUCHI ET AL (US 2001/0041772).

The copending Applications each claim composite bodies comprising a polyacetal component (e.g., polyoxymethylene) having an elastomeric component directly molded thereon, wherein the bond strength between the elastomeric component and the polyacetal components is at least  $0.5 \text{ N/mm}^2$  and wherein the elastomeric component comprises a thermoplastic polyester elastomer or thermoplastic polyetherester elastomer. The elastomeric component and the polyacetal components optionally contain conventional additives (e.g., stabilizers, nucleating agents, etc.). The composites are formed by injection molding a polyacetal component, followed by injection molding the elastomer component onto and over the polyacetal component. Features not explicitly claimed are known in the prior art as disclosed by ZIEGLER ET AL '797 and MASUBUCHI ET AL.

ZIEGLER ET AL '797 discloses composite bodies comprising a polyacetal component (e.g., polyoxymethylene) having thermoplastic elastomer components directly molded thereon, wherein the bond strength between the elastomer and the polyacetal components is at least  $0.5 \text{ N/mm}^2$ . The elastomer and the polyacetal components optionally contain conventional additives (e.g., stabilizers, nucleating agents, etc.). The composites are formed by injection molding a polyacetal component, followed by injection molding the elastomer component onto and over the polyacetal component, wherein the polyacetyl component is optionally preheated to at least  $80^\circ\text{C}$  to less than its melting point, and wherein the elastomer component has a typical melt temperature of  $180\text{-}240^\circ\text{C}$ , and wherein the mold temperature for the elastomer molding step is

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typically 20-100°C. The composite bodies form conveying and/or connectors with high durability and good dampening characteristics. (entire document, e.g., line 8-22, col. 1; line 47-50, col. 2; line 52, col. 2 to line 37, col. 3; line 60, col. 3 to line 8, col. 4; line 30-45, col. 5; line 52, col. 5 to line 2, col. 6; etc.)

MASUBUCHI ET AL discloses it is well known in the art to use thermoplastic polyetherester elastomers having a typical hardness of Shore D 32, wherein the elastomer comprises polybutylene terephthalate hard segments and polytetramethylene oxide soft segments in compositions suitable for conventional elastomer applications in order to obtain articles with advantageous flexibility, durability, heat resistance, chemical resistance, and other physical properties. (paragraphs 15-16, 20, 22, 112)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use known molding techniques as disclosed in ZIEGLER ET AL '797 and known elastomers as disclosed in MASUBUCHI ET AL to form the multi-component articles claimed in the copending Applications in order to obtain the optimum combination of mechanical properties, chemical and heat resistance, and other physical properties desired for specific applications. One of ordinary skill in the art would have selected the coverage and positioning of the elastomeric component depending on the specific mechanical and structural requirements for a given usage. It would have been obvious to apply multiple elastomer components on the polyacetal component (claim 9) depending on the specific structural and dampening requirements required for a specific application.

This is a provisional obviousness-type double patenting rejection.

***Claim Rejections - 35 USC § 103***

1. Claims 1-12, 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over:

ZIEGLER ET AL (US 6,296,797),

in view of EP 1 118 458 (EP '458) or MUTSUDA (US 6,517,949),

and in view of MASUBUCHI ET AL (US 2001/0041772).

ZIEGLER ET AL '797 discloses composite bodies comprising a polyacetal component (e.g., polyoxymethylene) having thermoplastic elastomer components directly molded thereon, wherein the bond strength between the elastomer and the polyacetal components is at least 0.5 N/mm<sup>2</sup>. The elastomer and the polyacetal components optionally contain conventional additives (e.g., stabilizers, nucleating agents, etc.). The composites are formed by injection molding a polyacetal component, followed by injection molding the elastomer component onto and over the polyacetal component, wherein the polyacetyl component is optionally preheated to at least 80°C to less than its melting point, and wherein the elastomer component has a typical melt temperature of 180-240°C, and wherein the mold temperature for the elastomer molding step is typically 20-100°C. The composite bodies form conveying and/or connectors with high durability and good dampening characteristics. (entire document, e.g., line 8-22, col. 1; line 47-50, col. 2; line 52, col. 2 to line 37, col. 3; line 60, col. 3 to line 8, col. 4; line 30-45, col. 5; line 52, col. 5 to line 2, col. 6; etc.) However, the reference does not explicitly disclose the use of polyester elastomers.

EP '458 and MUTSUDA ET AL disclose that it is well known in the art to use either polyester elastomers or polyurethane elastomers in composites with polyacetyl components in

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order to form durable, delamination resistant composite articles. (EP '458, paragraph 14, 18)  
(see corresponding portions of MUTSUDA ET AL).

MASUBUCHI ET AL discloses it is well known in the art to use thermoplastic polyetherester elastomers having a typical hardness of Shore D 32, wherein the elastomer comprises polybutylene terephthalate hard segments and polytetramethylene oxide soft segments in compositions suitable for conventional elastomer applications in order to obtain articles with advantageous flexibility, durability, heat resistance, chemical resistance, and other physical properties. (paragraphs 15-16, 20, 22, 112)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use known polyester-based elastomers as disclosed in EP '458 and MUTSUDA ET AL and MASUBUCHI ET AL as the elastomer component in the composites of ZIEGLER ET AL '797 in order to obtain the optimum combination of mechanical properties, chemical and heat resistance, and other physical properties desired for specific applications. One of ordinary skill in the art would have selected the coverage and positioning of the elastomeric component depending on the specific mechanical and structural requirements for a given usage. It would have been obvious to apply multiple elastomer components on the polyacetal component (claim 9) depending on the specific structural and dampening requirements required for a specific application.

#### ***Response to Arguments***

4. Applicant's arguments filed 2/11/2008 have been fully considered but they are not persuasive.

(A) Applicant argues that EP '458 and MUTSUDA ET AL teach away from the claimed invention because they disclose elastomers having acidic groups for enhanced adhesion with polyacetal resins. However, nothing in ZIEGLER ET AL '797 precludes or prohibits the use of functionalized polyester-based elastomers such as those disclosed in EP '458 and MUTSUDA ET AL. Furthermore, since said functionalized elastomers are clearly disclosed as having enhanced adhesion to polyacetal components, one of ordinary skill in the art would reasonably motivated to use such functionalized polyester-based elastomers as the elastomeric component in the composites of ZIEGLER ET AL '797 in the reasonable belief that using such elastomers would result in articles with improved intercomponent adhesion. Applicant has not provided any probative evidence to the contrary.

(B) Applicant argues that MASUBUCHI ET AL fails to cure the alleged deficiencies of the other relied upon references. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). MASUBUCHI ET AL is relied upon to illustrate the composition of conventional polyester-based elastomers and their typical hardness values. Applicant has not provided any probative evidence of criticality or unexpected results from the recited polyester-based elastomers or their hardness values.



***Conclusion***

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vivian Chen whose telephone number is (571) 272-1506. The examiner can normally be reached on Monday through Thursday from 8:30 AM to 6 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

The General Information telephone number for Technology Center 1700 is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 22, 2008

/Vivian Chen/  
Primary Examiner  
Art Unit 1794